WHAT IS CLAIMED IS:

Sub B13

1. A method of image data processing comprising the steps of:

storing image data in a memory having data words of a predetermined data width, each data word including a plurality of image pixels adjacently disposed on a single scan line, a set of a predetermined number of consecutive data words corresponding to a two dimensional tile of the image whereby adjacent data words store image pixels of adjacent scan lines;

transferring a tile of image data from the memory to a cache;

performing image operations upon tile data stored in the cache; and

transferring said tile of image data from the cache to the memory.

2. The method of claim 1, wherein:

said steps of transferring a tile of image data from the memory into a cache, performing image operations of tile data stored in the cache and transferring said tile of image data from the cache to the memory are repeated for each tile of image data.

3. The method of claim 1, wherein:

said steps of transferring a tile of image data from the memory into a cache, performing image operations of tile data stored in the cache and transferring said tile of image data from the cache to the memory are performed by different data processors for different tiles.

4. The method of claim 1, wherein:

said image processing includes read, modify and write of individual pixels within a data word.

5. An image data processing system comprising:

a memory storing image data having data words of a predetermined data width, each data word including a plurality of image pixels adjacently disposed on a single scan line, a set of a predetermined number of consecutive data words corresponding to a two dimensional tile of the image whereby adjacent data words store image pixels of adjacent scan lines;

a tile cache memory capable of storing a tile of image data from said memory;

a data processing apparatus connected to said memory and said tile cache memory, said data processing apparatus programmed to

transfer a tile of image data from said memory into said tile cache memory,

perform an image operation on said tile of image data stored in tile cache memory, and

transfer said tile of image data from said tile cache to said memory.

6. The image data processing system of claim 5, wherein:

said data processing apparatus is further programmed to operate on differing tiles of image data sequentially for each tile of image data.

7. The image data processing system of claim 5, further

comprising:

a second data processing apparatus connected to said memory and said tile cache memory, said second data processing apparatus programmed to

transfer a tile of image data from said memory into said tile cache memory,

perform an image operation on said tile of image data stored in tile cache memory, and

transfer said tile of image data from said tile cache to said memory; and

wherein said data processing apparatus and said second data processing apparatus are programmed to operate upon differing tiles of data simultaneously.